AMENDMENTS TO THE CLAIMS:

1-36. (Canceled).

37. (Currently amended) A drug delivery matrix, comprising a copolymer of ethylene with carboxylic acid and a drug contained within or attached to the matrix, wherein the copolymer is a coating on an implantable substrate.

38. (Previously presented) The drug delivery matrix of claim 37, wherein the carboxylic acid co-monomer content is no less than 5% by weight.

39. (Previously presented) The drug delivery matrix of claim 38, wherein the carboxylic acid co-monomer content is no more than 50% by weight.

40. (Previously presented) The drug delivery matrix of claim 37, wherein the carboxylic acid co-monomer content is no more than 50% by weight.

41. (Previously presented) The drug delivery matrix of claim 37, wherein the copolymer is ethylene acrylic acid.

42. (Previously presented) The drug delivery matrix of claim 37, wherein the carboxylic acid is selected from a group consisting of acrylic acid, methacrylic acid, maleic acid, itocanic acid, and esters thereof.

43. (Canceled).

44. (Allowed) A method of coating an implantable medical device, comprising:

adding a copolymer of ethylene with carboxylic acid to a solvent system to form a composition;

applying the composition to an implantable medical device; and

allowing the solvent system to evaporate.

45. (Allowed) The method of claim 44, wherein the carboxylic acid is selected from a group consisting of acrylic acid, methacrylic acid, maleic acid, itocanic acid, and esters thereof.

46. (Currently amended) The method of claim 44, wherein adding the copolymer to the solvent system further comprises neutralizing the copolymer in a volatile or a non-volatile base and dispersing the copolymer in water and/or a co-solvent ~~co-solvents~~.

47. (Allowed) The method of claim 44, further comprising adding a therapeutic agent to the solvent system.

48. (Allowed) The method of claim 44, wherein the solvent system comprises toluene.

49. (Allowed) The method of claim 48, wherein the solvent system further comprises a chlorinated solvent and a lower alcohol.

50. (New) The method of claim 44, wherein the carboxylic acid co-monomer content is no less than 5% by weight.

51. (New) The method of claim 50, wherein the carboxylic acid co-monomer content

is no more than 50% by weight.

52. (New) The method of claim 44, wherein the carboxylic acid co-monomer content is no more than 50% by weight.

53. (New) The method of claim 44, wherein the co-polymer is ethylene acrylic acid.

54. (New) The method of claim 44, wherein the device comprises a stent.

55. (New) The drug delivery matrix of claim 37, wherein the implantable substrate comprises at least a portion of a stent body.